

### **Remarks**

The present invention is directed to methods for inferring a bovine trait. Claims 1-28 and 33-38 are pending. Claims 1, 2, 8-24, 28, 33-34 has been amended. Claims 29-32 and 39-100 have previously been cancelled. By entry of this amendment, claims 1-28 and 33-38 are pending.

### **Examiner Interview**

Applicants would like to thank Examiner Thomas for the courtesy of a telephone interview on March 27, 2008 to discuss the present Office Action. In the interview, Applicants' representatives and the Examiner discussed the section 101 and 112, 1<sup>st</sup> paragraph rejections in view of the missing tables and the information provided therein. Applicants' representatives also discussed the rejections under sections 102 and 103 over the Akhter et al. and Cai et al. references. No agreement was reached, although Applicants' representatives greatly appreciated the Examiner's insight and helpful suggestions and comments.

### **Objections to the Specification**

The Tables 1A and 1B were originally filed with the application on December 31, 2003 but the disks were not accepted because the files were in non-ASCII format. Tables 1A and 1B were provided again in the filing dated September 24, 2004 in response to the Notice to File Missing Parts. For the Examiner's convenience, enclosed with this response are copies of the tables filed September 24, 2004.

### **Rejections under 35 U.S.C. §101**

In the absence of the information provided in Tables 1A and 1B of the specification, the Examiner asserts that the specification does not teach the utility of the claimed SNP to infer a trait. In the interview with Examiner Thomas, Applicants representatives provided an excerpt from Table 1A showing the SNP of SEQ ID NO:21645 as well as the SNP identity that is used to infer traits such as tenderness, marbling, daily gain, fat thickness and retail yield. Since the teachings of the specification and the information provided in Table 1A describe the utility of this SNP and methods of use to infer a bovine trait, withdrawal of this rejection is respectfully requested.

**Rejections under 35 U.S.C. §112, first paragraph**

Claims 1-7, 14-16, 23-28 and 33-38 have been rejected under 35 U.S.C. §112, first paragraph for not enabling the claimed invention. Applicants respectfully traverse the rejection as it applies to the amended claims.

Absent the information provided in Tables 1A and 1B, the Examiner asserts that the specification does not enable methods of inferring a trait using the SNP at position 300 of SEQ ID NO: 21645. During the interview Applicants' representatives provided an excerpt from Table 1A, (which is resubmitted with this response), that provides working examples of the use of this SNP to categorize a bovine subject into high and low categories for multiple traits such as tenderness, marbling, daily gain, fat thickness and retail yield. As such, the standard for enablement is clearly satisfied and Applicants respectfully request withdrawal of this rejection.

**Rejections under 35 U.S.C. §102**

Claim 1 has been rejected under 35 U.S.C. §102(a) for lacking novelty over Akhter et al. (GenBank AC092085). (“Akhter”). Applicants respectfully traverse the rejection as it applies to the amended claims

The Examiner asserts that Akhter teaches a method for inferring a trait of a bovine subject because it shows an a/t nucleotide at position 97781 that represents one of the two possible SNPs at this position. The claims are directed to a method of inferring a bovine trait by determining the nucleotide occurrence of the SNP at position 300 of SEQ ID NO:21645. Akhter is simply a direct submission of sequence information to GenBank. It is respectfully submitted that nowhere in the Akhter reference is disclosed any traits associated with the SNP at this position or methods of inferring a trait with this SNP. The Examiner cites nucleotide 97781 of Akhter as anticipating the claimed methods. However, Akhter fails to teach that this specific nucleotide position out of 188,320 nucleotides in the GenBank submission is associated with any bovine trait, nor does Akhter disclose any particular relevance of this specific nucleotide over the other nucleotides in this reference. Since the claims are directed to methods of using this SNP position and not to a nucleotide composition, it is respectfully submitted that Akhter fails to disclose all elements of the claims and therefore fails to anticipate the claimed methods. Withdrawal of this rejection is respectfully requested.

**Rejections under 35 U.S.C. §103**

Claims 2-7, 14-16, 23-28 and 33-38 have been rejected under 35 U.S.C. §103 for being obvious over Akhter (“Akhter”) in view of Cai (“Cai”). Applicants respectfully traverse the rejection as it applies to the amended claims

The Examiner asserts that Akhter teaches a method for inferring a trait of a bovine subject using a SNP at position 300 of SEQ ID NO:21645, and that Cai discloses methods of inferring bovine traits using at least two SNPs. Akhter is discussed above. Akhter fails to disclose methods of inferring a bovine trait using a SNP at position 300 of SEQ ID NO: 21645 nor does Akhter disclose any traits associated with that SNP position or methods of use. Cai fails to make up for the deficiencies of Akhter because Cai also fails to disclose methods of inferring a trait associated with a SNP at position 300 of SEQ ID NO:21645. Absent the teachings of the present specification including Tables 1A and 1B, one of ordinary skill would have to undertake an extreme amount of undue experimentation to determine which nucleotide differences in the approximately 200000 nucleotides disclosed by Akhter would be useful to infer a bovine trait. Cai fails to provide this teaching and therefore even if one of ordinary skill in the art could find motivation to combine these references, the combined teachings would not even approximate the claimed methods. Therefore, it is respectfully submitted that the claimed methods are not obvious in view of Akhter and Cai alone, or in combination and Applicants respectfully request withdrawal of this rejection.

**Conclusions**

Applicants submit that the response herein provides a complete response to the Office Action dated October 2, 2008

If the Examiner believes there are other issues that may be resolved by telephone interview, or that there are any informalities remaining in the application that may be corrected by Examiner's Amendment, a telephone call to the undersigned is respectfully solicited.

No additional fees are believed due, however the Commissioner is hereby authorized to charge any additional fees that may be required, or credit any overpayment of fees to Deposit Account number 11-0980.

Respectfully submitted,



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